

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A method for measuring non-invasively a blood pressure of a patient,

~~characterized in that~~ the method ~~comprises~~ comprising the steps of:

determining a mechanical heart beat starting time point from an impedance

cardiogram signal,

measuring the heart to peripheral site pulse beat transit time start point by

measuring an ECG QRS-complex,

adding correction to the QRS-complex signal by averaging a QRS to

impedance cardiogram (ICE) waveform timing point,

detecting a heart beat pulse arrival time at a peripheral site of the patient by

using an optical plethysmographic sensor at the peripheral site,

calculating a pulse wave transit time from the heart to the peripheral site by

utilizing said mechanical starting point of the heart beat and said heart beat pulse arrival time,

calculating an estimate of the blood pressure of the patient from said pulse

wave transit time.

Claim 2 (Currently amended): A method according to claim 1, ~~characterized in that~~
wherein the method comprises a step of

calibrating the blood pressure calculation by oscillometric cuff

measurement of the blood pressure of the patient.

Claim 3 (Currently amended): A method according to claim 2, ~~characterized in that~~
wherein the method comprises the step of
performing successively the step of calibrating the blood pressure
calculation by oscillometric cuff measurement.

Claim 4 (Currently amended): A method according to claim 3, ~~characterized in that~~
wherein said step of calibrating the blood pressure calculation is improved incrementally
on each cuff inflation cycle.

Claims 5 - 6 (Cancelled)

Claim 7 (Currently amended): A method according to claim 1, ~~characterized in that~~
wherein the method comprises a step of correcting a reflected wave component of a the
~~peripheral site~~ plethysmogram at the peripheral site in response to a change in the
plethysmogram amplitude.

Claim 8 (Cancelled)

Claim 9 (Currently amended): A system for measuring non-invasively the blood pressure
of a patient wherein ~~characterized in that~~ the system comprises:

an impedance cardiogram for determining the mechanical heart beat starting
time point of a patient,

5 | ~~a peripheral site~~ an optical plethysmographic sensor at a peripheral site for
determining the heart beat pulse arrival time at the peripheral site of the patient,

a first calculator for calculating the pulse wave transit time from the heart to
the peripheral site by utilizing said mechanical starting point of the heart beat and said
heart beat pulse arrival time at the peripheral site of the patient,

10 a second calculator for calculating the blood pressure of the patient from
said pulse wave transit time,
 said system further arranged to measure the pulse wave transit time start
 point by measuring an electrocardiogram (ECG) QRS-complex; and
 said system arranged to add correction to the QRS-complex signal by
15 averaging QRS to impedance cardiogram (ICG) waveform timing point.

Claim 10 (Currently amended): A system according to claim 9 for measuring non-invasively the blood pressure of a patient ~~characterized in that~~ wherein the system comprises:

 an oscillometric cuff for calibrating the blood pressure calculation by
5 measuring the blood pressure of the patient.

Claim 11 (Currently amended): A system according to claim 9 10 for measuring non-invasively the blood pressure of a patient wherein ~~characterized in that~~ the oscillometric cuff is adapted to perform the calibration of the blood pressure calculation by successive oscillometric cuff measurements.

Claim 12 (Currently amended): A system according to claim 9 11 for measuring non-invasively the blood pressure of a patient wherein ~~characterized in that~~ the calibration of the blood pressure calculation is improved incrementally on each cuff inflation cycle.

Claims 13 - 14 (Cancelled)

Claim 15 (Currently amended): A system according to claim 9 for measuring non-invasively the blood pressure of a patient wherein ~~characterized in that~~ said peripheral site

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5 | plethysmogram is arranged to correct a reflected wave component of the ~~peripheral site~~
plethysmogram at the peripheral site in response to a change in plethysmogram
amplitude.

Claims 16 - 20 (Cancelled)